

REMARKS

The present application was filed on April 6, 2000 with claims 1-91. In the outstanding Office Action, the Examiner has: (i) rejected claims 1-29, 34, 36-73, 78, 80-87, 90 and 91 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,269,336 to Ladd et al. (hereinafter "Ladd"); (ii) rejected claims 5 and 49 under 35 U.S.C. §103(a) as being unpatentable over Ladd in view of "New VXML Forum," posted at Cover Pages Hosted by Oasis (hereinafter "New VXML Forum"); (iii) rejected claims 31, 32, 75 and 76 under 35 U.S.C. §103(a) as being patentable over Ladd in view of U.S. Patent No. 6,569,207 to Sundarsesan (hereinafter "Sundarsesan"); (iv) rejected claims 30 and 74 under 35 U.S.C. §103(a) as being patentable over Ladd in view of World Wide Web Consortium document entitled "Extensible Stylesheet Language (XSL) version 1.0" (hereinafter referred to as "W3C XSL specification"); (v) rejected claims 33, 77, and 88 under 35 U.S.C. §103(a) as being unpatentable over Ladd in view of U.S. Patent No. 6,493,758 to McLain (hereinafter "McLain"); and (vi) rejected claims 35, 79, and 89 under 35 U.S.C. 103(a) as being unpatentable over Ladd in view of U.S. Patent No. 6,456,974 to Baker et al. (hereinafter "Baker").

In this response, Applicants: (i) amend independent claims 1, 44, 90 and 91; and (ii) traverse the various §102 and §103 rejections of claims 1-91 for at least the following reasons. Applicants are filing this Amendment along with a Request for Continued Examination (RCE).

While Applicants believe that the claims of the present application, in their form prior to the present Amendment, are patentable over the cited references, Applicants nonetheless amend independent claims 1, 44, 90 and 91 herein to further clarify the subject matter of the invention in a sincere effort to expedite the present application through to allowance. Support for the amendments may be found throughout the present specification, by way of example only, see pages 6 through 19.

Regarding the §102(e) rejections of claims 1-29, 34, 36-73, 78, 80-87, 90 and 91, Applicants assert that Ladd fails to teach or suggest all of the limitations in said claims for at least the reasons presented below.

It is well-established law that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Applicants assert that the rejection based on Ladd does not meet this basic legal requirement, as will be explained below.

The present invention, for example, as recited in amended independent claim 1, recites a method of generating an application accessible by a user through one or more computer-based devices, comprising the following steps. Interactions that the user is permitted to have with the one or more computer-based devices used to access the application are represented by interaction-based programming components. The interaction-based programming components are independent of content/application logic and presentation requirements associated with the application. Further, the interaction-based programming components may be transcoded on a component by component basis to generate one or more modality-specific renderings of the application renderable in accordance with one or more modality-specific browsers associated with the one or more computer-based devices, such that the interaction-based programming components are independent of any modality and any modality-specific browser. The application is then authored using at least a portion of the interaction-based programming components. Independent claim 91 recites similar limitations in an article of manufacture format. Independent claims 44 and 90 recite respective apparatus for accessing applications having similar limitations.

As explained in the present specification at page 6, line 26, through page 7, line 6, the invention defines a new application programming paradigm. As mentioned in the background section of the present specification, existing application authoring approaches have adopted the concept of separating the content based aspects of an application from the presentation based aspects. In accordance with the present invention, a new paradigm is introduced, illustratively embodied as a Conversational Markup Language (CML), which provides for separating application programming into content aspects, presentation aspects and interaction aspects. By focusing on the interaction aspect of an application with respect to a user, an application may be written in a manner which is independent of the content/application logic and presentation. The “interaction-based programming components” recited in independent claims 1, 44, 90 and 91 provide such advantages since, as expressly recited, they are independent of content/application logic and presentation

requirements associated with the application and they may be transcoded on a component by component basis to generate one or more modality-specific renderings of the application renderable in accordance with one or more modality-specific browsers associated with the one or more computer-based devices, such that the interaction-based programming components are independent of any modality and any modality-specific browser. Examples of such presentation requirements and modality-specific renderings include visual based (e.g., text and graphical) renderings, speech based renderings, and combinations thereof.

Thus, as further explained in the present specification, at pages 7 and 8, in accordance with the invention, a device operating with downloaded CML code can transcode to, for example, HTML and VoiceXML, substantially simultaneously so as to synchronize the multiple browsers providing the user with access to information. Such advantageous synchronization according to the invention is possible because the transcoding is done gesture by gesture with gesture identification. Thus, when an input/output event occurs in one modality, the browser knows what event occurred for what gesture and can immediately update all the supported modalities. This results in a very tight synchronization across modalities. Such synchronization is also achieved due to the fact that the various modality-specific user interface dialogues, e.g., associated with a graphical user interface (GUI) browser or a speech browser, are generated from a single CML representation, on a gesture by gesture basis. Thus, the multiple user interfaces, e.g., GUI, speech, etc., are synchronized and continuously updated as a user interactively proceeds with one or the other modality.

Ladd is significantly different than the claimed invention. Ladd merely discloses a voice browser that may operate with speech applications authored using a voice-based markup language such as VoxML™, see column 5, lines 8-11 of Ladd. Such voice-based markup language is no different than the programming paradigm employed by existing applications, as mentioned above, where only the content based aspects of an application are separated from the presentation based aspects. However, in accordance with the claimed invention, application programming is advantageously separated into content aspects, presentation aspects and interaction aspects. Thus, as independent claims 1, 44, 90 and 91 recite, the invention provides for representing interactions that the user is permitted to have with the one or more computer-based devices used to access the

application by interaction-based programming components, wherein the interaction-based programming components are independent of content/application logic and presentation requirements associated with the application and the interaction-based programming components may be transcoded on a component by component basis to generate one or more modality-specific renderings of the application renderable in accordance with one or more modality-specific browsers associated with one or more computer-based devices, such that the interaction-based programming components are independent of any modality and any modality-specific browser.

Columns 12 through 43 of Ladd evidence the fact that the voice-based markup language and browser of Ladd are clearly not independent of content/application logic and presentation requirements associated with the application, as in the claimed invention.

In the outstanding Office Action (“Response to Arguments”), the Examiner again cites column 12 and, this time, interpreter 304 of Ladd in support of the rejection. However, it is quite clear the syntax and grammar shown in column 12 of Ladd is not independent of any modality and any modality-specific browser, as in the claimed invention, since interpreter 304 (and parser 302) are an integral part of voice browser 250 (see column 11, lines 64-67). Voice browser 250 is a modality-specific browser; the modality being voice or speech. Thus, the syntax and grammar that voice browser 250 parses and interprets is clearly not independent of any modality and any modality-specific browser, as in the claimed invention.

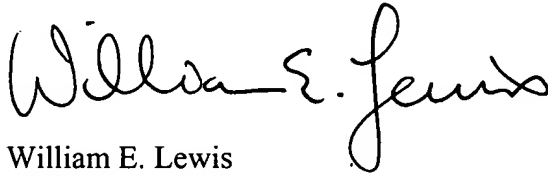
For at least the above reasons, Applicants assert that independent claims 1, 44, 90 and 91 are patentable over Ladd. Further, Applicants assert that dependent claims 2-29, 34, 36-43, 45-73, 78 and 80-87 are patentable over Ladd not only because they respectively depend from independent claims 1 and 44, but also because said claims recite patentable subject matter in their own right. Accordingly, withdrawal of the §102(e) rejections is respectfully requested.

Regarding the §103(a) rejections of claims 5, 30-33, 35, 49, 74-77, 79, 88 and 89 under 35 U.S.C. §103(a) based on various combinations of the New VXML Forum, the W3C XSL specification, McLain and Baker, Applicants assert that said claims are patentable over the various combinations not only because they respectively depend from independent claims 1 and 44, but also because said claims recite patentable subject matter in their own right. The New VXML Forum, the W3C XSL specification, McLain and Baker fail to remedy the deficiencies of Ladd presented above. To the degree that any rejections still rely on the taking of Official Notice, Applicants traverse the

taking of Official Notice and request a showing of actual prior art references that disclose the claimed features and provide appropriate motivation to combine. Accordingly, withdrawal of the §103(a) rejections is respectfully requested.

In view of the above, Applicants believe that claims 1-91 are in condition for allowance, and respectfully request favorable reconsideration.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William E. Lewis". The signature is fluid and cursive, with the first name "William" being more prominent and the last name "Lewis" following in a similar style.

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